

Remarks/Arguments

Claims 1-3, 6-19, 22-40 are now pending in this application. In the February 5, 2008 Office Action, Claims 16, 17, 22, 23, 28-33, 36-38 and 40 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 7,093,244 to Lajoie et al. (hereinafter "*Lajoie*"). Claims 1-3, 6-9, 12-15, and 34 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lajoie in view of U.S. Patent No. 7,080,134 to Doherty et al. (hereinafter "*Doherty*") in view of "Java Network Programming, 2nd Edition" by Harold (hereinafter "*Harold*"). Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over *Lajoie*, *Doherty*, and *Harold*, as applied to claim 9, further in view of U.S. Patent Application No. 2004/0181691 to Armingaud et al. (hereinafter "*Armingaud*") and U.S. Patent Application No. 2002/0002688 to Gregg et al. (hereinafter "*Gregg*"). Claim 11 was rejected under 35 U.S.C. 103(a) as being unpatentable over *Lajoie* in view of *Doherty* in view of *Harold*, as applied to claim 2, and further in view of U.S. Patent No. 6,266,809 to Craig et al. (hereinafter "*Craig*"). Claim 27 was rejected under 35 U.S.C. 103(a) as being unpatentable over *Lajoie* and further in view of *Craig*. Claim 35 was rejected under 35 U.S.C. as being unpatentable over *Lajoie*, as applied to claim 32 above, and further in view of U.S. Patent Application No. 2003/0204843 to Bartmettler et al. (hereinafter "*Bartmettler*"). Claims 1-3, 6-15 and 32 were provisionally rejected on the grounds of nonstatutory double patenting over claims 1-3, 5-12 and 15-17 of copending application No. 10/770,951. Claim 31 was rejected under 35 U.S.C. 101 as being directed to nonstatutory subject matter.

By this amendment, claims 22, 28-29, and 38 have been cancelled. Claims 1, 16-17, 23-27, 31, 37, and 39-40 have been amended. Following entry of this amendment, claims 1-3, 6-19, 23-27, 30-37, and 39-40 will be pending in the present application. For the reasons set forth below, the applicants respectfully request reconsideration and immediate allowance of this application.

Provisional Double Patenting Rejections

Claims 1-3, 6-15 and 32 were provisionally rejected on the grounds of nonstatutory double patenting over claims 1-3, 5-12 and 15-17 of copending application No. 10/770,951. Since this is a provisional double patenting rejection, this double patenting rejection will be

addressed, if necessary, once allowable claims associated with either the current application or the copending application are determined.

Claim Rejections Under 35 U.S.C. 101

Claim 31 was rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Claim 31 has been amended to recite “computer readable storage medium” in an effort to address the Examiner’s concerns. Claim 31, as amended, is considered to fulfill the requirements of 35 U.S.C. § 101. Accordingly, the applicants respectfully submit that the rejection under 35 U.S.C. § 101 has been overcome and request withdrawal of the rejections.

Claim Rejections Under 35 U.S.C. 102(e) and 35 U.S.C. 103(a)

Independent Claim 1

Claim 1 recites, *inter alia*, “receiving over the distributed network at the network attached computer, an instruction to begin a firmware recovery procedure, the instruction received while executing an operating system.” The recited portion of claim 1 makes clear that another computer (i.e., not the network attached computer) initiates the firmware recovery procedure by sending the instruction to the network attached computer. For example, as illustrated in Figure 1 of the instant application, the manager computer may send the instruction to the network attached computers: “The recovery manager utility 32 may send an update instruction over the network 18 to a recovery OS application executing on a network attached computer and monitoring a communication port for instruction activity.” (Specification at p. 8, lines 5-7).

Lajoie discloses two types of upgrades: (1) a server-initiated upgrade where only the application program 310 is upgraded; and (2) a self-upgrade where the base layers, comprising the upgrade program 320, the communication protocol stack 330, and the mutable IVT 340, are upgraded. (*Lajoie* at col. 6, lines 21-27). As previously mentioned, claim 1 recites that the network attached computers receive the instruction to begin the firmware recovery procedure from another computer, such as the manager computer. That is, the network attached computers do not self-initiate the firmware recovery procedure according to claim 1. Therefore, the second type of upgrade disclosed by *Lajoie* is irrelevant to claim 1 since it describes a self-upgrade initiated by the field deployed devices 120 and not the upgrade server 110.

Focusing on the first upgrade, *Lajoie* discloses a server-initiated upgrade where only the application program 310 is upgraded. By admission, the Office Action alleges that the application program 310 is an operating system. (Paper No. 20080125 at p. 3). Assuming, *arguendo*, that the Office Action's allegation is true, claim 1 does not recite anything remotely related to upgrading the operating system. Indeed, claim 1 itself distinguishes the terms "firmware" and "operating system." Further, throughout the instant application the operating system is clearly distinguished from the updated firmware (e.g., the BIOS).

In response to the above, the Office Action at p. 3 alleges that "a reasonable broad interpretation of the claim language does not restrict the firmware from containing the operating system." The applicants believe that such an interpretation is incorrect because it renders the use of separate claim terms, firmware and operating system, to be entirely superfluous. Further, such an interpretation would render certain claim recitations, such as "updating a current firmware ..., in the operating system independent environment" virtually meaningless. Nevertheless, Claim 1 has been amended to recite "the operating system being separate from the firmware." Since it is now expressly recited in the claims that the operating system and the firmware are mutually exclusive, it becomes clear that the server-initiated upgrade of the application program 310 is patentably distinguishable from the firmware update procedure recited in Claim 1.

It is respectfully submitted that neither *Doherty* nor *Harold* cure the above described deficiencies of *Lajoie*. Accordingly, neither *Lajoie*, *Doherty*, nor *Harold*, alone or in any combination, teach or suggest "receiving over the distributed network at the network attached computer, an instruction to begin a firmware recovery procedure, the instruction received while executing an operating system," as recited in claim 1.

Claim 1 further recites "in response to receiving the instruction, rebooting the network attached computer to an operating system independent operating environment." While conceding that *Lajoie* does not disclose the recited portion of claim 1, the Office Action also alleges that *Doherty* discloses "in response to receiving the instruction, rebooting the network attached computer to an operating system independent operating environment." Even assuming, *arguendo*, that the Office Action's allegation is true, a significant problem arises when attempting to combine the *Doherty* with *Lajoie*. In particular, *Lajoie* discloses an upgrade procedure as follows:

In the case of an upgrade of the upgrade program itself, the upgrade process preferably starts by the transferring control of the device 120 to the upgrade program 320. Instructions are then given to copy the new upgrade program 320 from the server 110 to the application program memory area 220. Once this is completed, the new upgrade program is copied to the upgrade program memory area 230 and control of the device 120 is subsequently transferred to the new upgrade program 320 therein.

Lajoie discloses that control of the field deployed device 120 is transferred from the application program 310 to the upgrade program 320 on the upgrade server 110. *Lajoie* does not disclose a need to reboot of the field deployed device 120 in order to transfer control to the upgrade server 110. Indeed, rebooting the field deployed device 120 may simply transfer control back to the application program 310, thereby terminating the action of transferring control to the upgrade server 110. This is clearly improper; it is well understood that a modification to the cited art cannot render the cited art unsatisfactory for its intended purpose or change the principle of operation of a reference.

The MPEP states that “[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” MPEP §2143.01, citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). The MPEP also states that, in the *Ratti* case, “[t]he court reversed the rejection holding the ‘suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate.” MPEP §2143.01, citing *In re Ratti*, 270 F.2d at 813, 123 USPQ at 352.

In response to the above, the Office Action at p. 4 alleges that “the test for obviousness is not whether the features of a secondary reference may not be bodily incorporated into the structure of the primary reference.” This statement appears to directly contradict the case law recited above, and in particular, the *Ratti* case. The applicants respectfully request support for the alleged statement of law or an explanation reconciling the statement with MPEP §2143.01.

Claim 1 further recites “receiving a new firmware image in fragments over the distributed network in the operating system independent environment; receiving a broadcast status request prior to updating a current firmware with the new firmware image; in response to receiving the broadcast status request, determining whether a rebroadcast of any fragment of the new firmware image is necessary; in response to determining that the rebroadcast of one or more fragments is

necessary, sending a request for the rebroadcast of the fragments; in response to sending the request for the rebroadcast of the fragments, receiving the rebroadcast of the fragments in response to sending the request.” The Office Action relies primarily on *Harold* with regards to the above recitations. In particular, the Office Action relies on the portion of *Harold* that discusses the UDP protocol, which is entirely unrelated to claim 1. *Harold* does not disclose or even address in any manner, “receiving a new firmware image in fragments”, “receiving a broadcast status request prior to updating a current firmware with the new firmware image”, “sending a request for the rebroadcast of the fragments”, and “receiving the rebroadcast of the fragments in response to sending the request.”

Accordingly, *Lajoie*, *Doherty*, and *Harold*, alone or in any combination, do not teach, suggest, or describe each and every element of amended independent claim 1. The applicants further submit that claims 2-3 and 6-15 are also patentable because they contain recitations not taught by *Lajoie*, *Doherty*, and *Harold* and because these claims depend from an allowable independent claim. The applicants therefore submit that claims 1-3 and 6-15 are in condition for immediate allowance.

Independent Claim 16

Claim 16 has been amended to recite a “method for recovering BIOS on a network attached computer over a distributed network.” Amended claim 16 recites, *inter alia*, “while the network attached computer is in an operating system independent state, sending a recovery request in response to determining that the current BIOS is invalid.” *Lajoie* does not disclose that a computer is in an operating system independent state nor that a recovery request is sent while the network attached computer is in an operating system independent state.

Claim 16 further recites, *inter alia*, “booting the network attached computer with the current BIOS in response to determining that the current BIOS within the network attached computer is valid.” With respect to this recitation, the Office Action relies on *Lajoie* at col. 7, lines 45-47 as an example. *Lajoie* at col. 7, lines 45-47 states that “[i]f the firmware passes the CRC-16 integrity check, the FIC 350 transfers control to the application program 310.” It should be noted that that merely passing control to the application 310 is patentability distinguishable from “booting the network attached computer.” Further, *Lajoie* specifically mentions booting in another context: “The FIC 350 is the first code to run when control is transferred from the boot

ROM 206 to the NVM 210 after a reset or power up.” (*Lajoie* at col. 7, lines 10-12). However, *Lajoie* does not disclose that passing control involves a reset or power up. As such, *Lajoie* does not disclose “booting the network attached computer with the current BIOS in response to determining that the current BIOS within the network attached computer is valid.” *Lajoie* also does not disclose “in response to determining that the updated current BIOS is valid, booting the network attached computer with the updated current BIOS,” also as recited in claim 16.

Accordingly, *Lajoie* does not teach, suggest, or describe each and every element of independent claim 16. The applicants further submit that claims 17-19, 23-27, and 30-31 are also patentable because they contain recitations not taught by *Lajoie* and because these claims depend from an allowable independent claim. The applicants therefore submit that claims 16-19, 23-27, and 30-31 are in condition for immediate allowance.

Independent Claim 32

Claim 32 recites, *inter alia*, “a second computer comprising the network attached computer operative to...in response to receiving the instruction, transition to an OS independent recovery state; [and] in response to transitioning to the recovery state, send the notification of readiness to the first computer over the network.” *Lajoie* discloses that after the server 110 sends the escape message to the device 120, the device 120 transfers control to the upgrade program 320 in the server 110. (*Lajoie* at col. 4, lines 20-23). *Lajoie* does not disclose that the device 120 transitions to an OS independent recovery state in response to receiving the escape message, nor does *Lajoie* disclose sending a notification of readiness to the server 110.

In response to the above, the Office Action at p. 5 alleges that “*Lajoie* discloses transitioning out of normal operating mode in response to the escape message (see col. 4 lines 23-24: “Upon reception of the escape message, the device 120 breaks out of normal operation mode.”) However, claim 32 does not recite that the second computer merely transitions out of normal operating mode, but rather that it transitions to “an OS independent recovery state.” Whether or not *Lajoie* discloses transitioning out of normal operating mode is entirely irrelevant as it does not address any of the elements of the claim 32.

In further response to the above, the Office Action at p. 5 alleges that “*Lajoie* further discloses sending notification to the server (see column 4 lines 26-29: “waiting for an acknowledgment from the device.”) However, the Office Action’s quotation removes the

remainder of the sentence. A further reading of *Lajoie* indicates that the server 110 is “waiting for an acknowledgment from the device 112 before sending out the next message.” That is, the server 110 is merely waiting for a message acknowledgement, i.e., an acknowledgement that the previous message was sent. *Lajoie* does not disclose that the server 110 is “in response to transitioning to the recovery state, send the notification of readiness to the first computer over the network.”

Accordingly, *Lajoie* does not teach, suggest, or describe each recitation of independent claim 32. The applicants further submit that claims 33-36 are also patentable because they contain recitations not taught by *Lajoie* and because these claims depend from an allowable independent claim. Accordingly, the applicants submit that claims 32-36 are in condition for immediate allowance.

Independent Claim 37

Claim 37 has been amended to recite a “recovering the BIOS of at least one network attached computer over a network.” Amended claim 16 recites, *inter alia*, “in response to determining that the current BIOS is invalid, send the recovery request to the first computer over the network while the second computer is in the operating system independent recovery state.” *Lajoie* does not disclose that a computer is in an operating system independent state nor that a recovery request is sent while the second computer is in an operating system independent state.

Accordingly, *Lajoie* does not teach, suggest, or describe each recitation of independent claim 37. The applicants further submit that claims 39-40 are also patentable because they contain recitations not taught by *Lajoie* and because these claims depend from an allowable independent claim. Accordingly, the applicants submit that claims 37 and 39-40 are in condition for immediate allowance.

Conclusion

In view of the foregoing amendment and remarks, the applicants respectfully submit that all of the pending claims in the present application are in condition for allowance. Reconsideration and reexamination of the application and allowance of the claims at an early date is solicited. If the Examiner has any questions or comments concerning this matter, the Examiner is invited to contact the applicants’ undersigned attorney at the number below.

Respectfully submitted,

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